µL927 QUAD INVERTER

INDUSTRIAL RTL MICROLOGIC® INTEGRATED CIRCUITS

GENERAL DESCRIPTION - The Industrial RTL Microcircuit line, is a family of medium power and low power integrated building blocks. These elements are designed for a wide variety of commercial industrial equipment operating over a temperature range of +15°C to +55°C. By combining medium power and low power Micrologic® integrated circuits, high fan-out (>16), low power dissipation (<mW/Node), high speed (10 ns), and high noise immunity are possible. The loading chart shown below is guaranteed over the temperature range by a worst case specification.

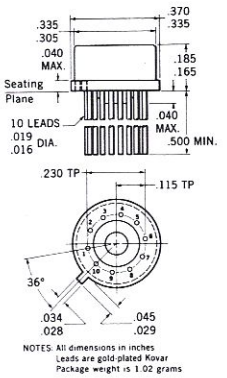
OPERATING VOLTAGE RANGE

V_{CC} - Collector Supply Voltage = 3.6 V ±10%

NOISE IMMUNITY	Typical	Worst Case
	300 mV	100 mV

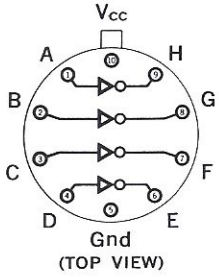
POWER DISSIPATION at 25°C, V_{CC} = 3.6 V = 20 mW/Node.

PHYSICAL DIMENSIONS



NOTES: All dimensions in inches
Leads are gold plated Kovar
Package weight is 1.02 grams

QUAD INVERTER



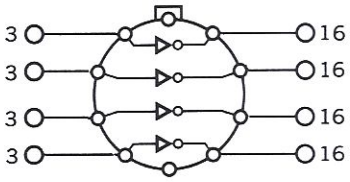
(TOP VIEW)

POSITIVE AND NEGATIVE LOGIC

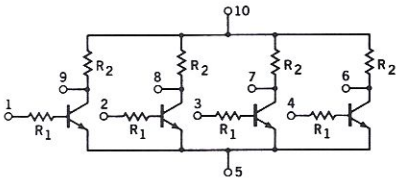
H = $\overline{A}$
G = $\overline{B}$
F = $\overline{C}$
E = $\overline{D}$

LOADING CHART

[Note 1]



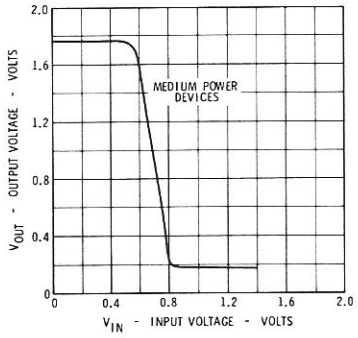
µL927 SCHEMATIC

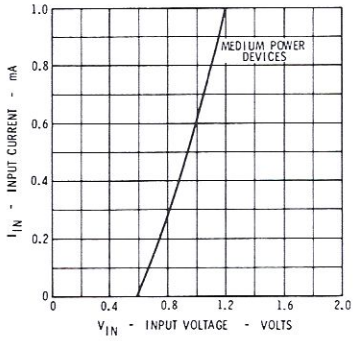


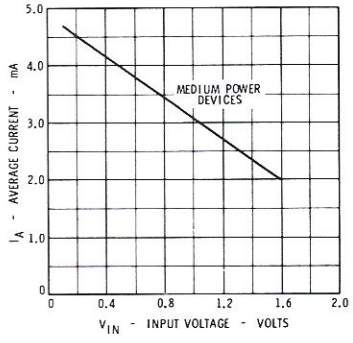
Typical Resistors

R_1 = 450 Ω
R_2 = 650 Ω

TYPICAL TRANSFER CHARACTERISTICS







Note:

(1) Valid for system operation over a temperature range of +15°C to +55°C, and V_{CC} = 3.6 V ±10%. This chart gives loading rules for intermixing of medium power and low power Micrologic® integrated circuits in a system.

FAIRCHILD SEMICONDUCTOR
A DIVISION OF FAIRCHILD CAMERA AND INSTRUMENT CORPORATION

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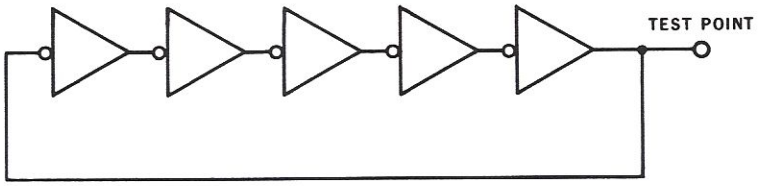
MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U. S. PATENTS: 291877, 3015048, 3025589, 3064167, 3108359, 3117260; OTHER PATENTS PENDING.

DESIGN INFORMATION

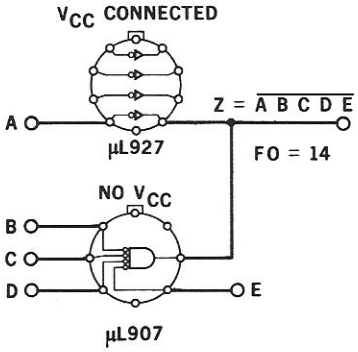
$$T_{pd} = \frac{\text{PERIOD}}{2 \times 5}$$

µL927 = 10 nsec

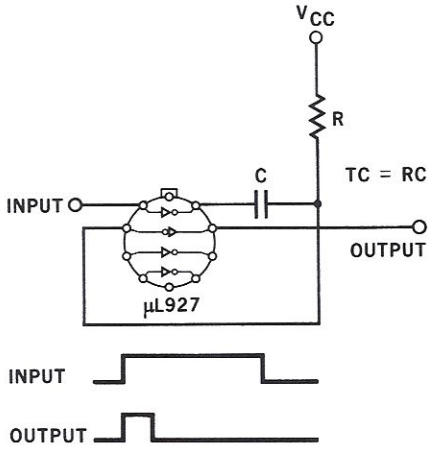


AVERAGE PROPAGATION DELAY
(Operating ring with 5 elements, at 25° C)

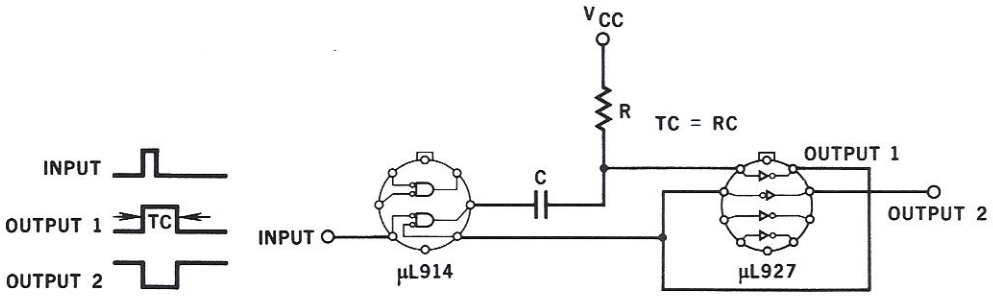
TYPICAL APPLICATIONS — NEGATIVE TRUE LOGIC



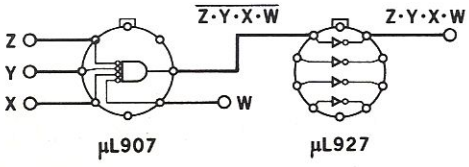
SUGGESTED INPUT
PARALLELING CONFIGURATION

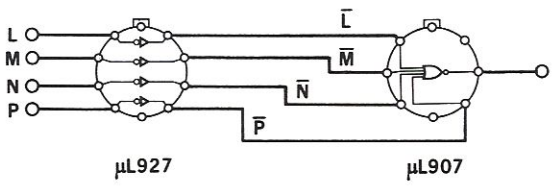


SINGLE SHOT
(Input longer than T C)



SINGLE SHOT
(Input narrower than T C)





L+M+N+P
(NEGATIVE TRUE LOGIC)

L·M·N·P
(POSITIVE TRUE LOGIC)

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